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EXAMINER	
STEWART, KIMBERLY ANN	

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1791	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/564,323	DOMSCHKE ET AL.	
	Examiner	Art Unit	
	KIMBERLY A. STEWART	1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 May 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *67-93* is/are pending in the application.

4a) Of the above claim(s) *78-93* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *67-77* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *1-11-2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *10-1-2007*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This is a non-final Office action in response to the claims submitted on 8-3-2006.

Election/Restrictions

1. Applicant's election with traverse of Group I, method claims 67-77, in the reply filed on 5-3-2010 is acknowledged. The traversal is on the ground(s) that electronic searching permits the USPTO to search all claimed subject matter without producing an undue burden on the examiner and on the grounds that US Patent 5,989,923 to Lowe et al. do not teach all common features of each of the Groups identified by the USPTO. This is not found persuasive because the examiner considers the common inventive feature to be the crosslinkable fluid comprising a molecular sensing moiety which can interact or react with an analyte of interest to provide an optical signal which is indicative of a change in one or more optical properties of the reflection hologram, is generally disclosed in Lowe et al (US 5,989,923), of record. Therefore the common inventive feature is not considered to be novel.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 67, 68, 70, 71, 75, 76 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang et al (WO 99/33642) of record, in view of Millington (US 2003/0103868).

6. Regarding claim 67, Zhang et al teach a method for making a biocompatible article/contact lens [pg 2, para 2, contact lens would be biocompatible] containing a hologram, comprising the steps of:

7. introducing a crosslinkable and/or polymerizable fluid [crosslinkable modified polyvinyl alcohol] material into a cavity [female mold half] formed by a mold [pg 12, Example],

8. wherein the mold has a first mold half [female or male mold half] defining a first molding surface and a second mold half [female or male mold half] defining a second molding surface [page 12, Example],

9. wherein said first mold half and said second mold half are configured to receive each other such that the cavity is formed between said first molding surface and said second molding surface [cavity formed between female and male mold halves, page 12, Example]; and

10. producing and recording a pattern of interference fringes while polymerizing/crosslinking said crosslinkable and/or polymerizable fluid material in the cavity to form an HOE, or holographic optical element/optical lens, thereby said pattern is recorded in said biocompatible HOE to form the hologram [pg 3, para 3].

11. Zhang et al do not teach that the lens HOE polymerizable fluid material comprise at least a molecular sensing moiety which can interact or react with an analyte of interest to provide an optical signal which is indicative of a change in one or more optical properties of the reflection hologram, or that said hologram is specifically a reflection hologram. However, Millington teaches, in the analogous field of forming holograms in polymeric materials [Abs] like contact lenses [0023], that such a hologram may be incorporated as an analyte sensor [Abs, 0028] to provide a convenient way to detect changes in levels of substances that may be biological [0028], such changes

being easily detected visually by the eye [Abs], with such a change being displayed as a refection hologram if desired for a thin film of polymeric material [0002, 0008] where the Bragg equation mathematically defines the peak wavelength of constructive interference [0053]. Further, Millington teaches that a molecular sensing moiety [the chemically sensitive polymer] may be directly sensitive to the substance/analyte, or it may be sensitive to the product of a reaction or interaction between the analyte and another ambient substance provided specifically as components of the holographic sensor assembly [0027]. The examiner considers that the polymer or the polymer with the/a additional substance to be the molecular sensing moiety.

12. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify or combine the teachings of Zhang et al with those of Millington to provide a convenient way to detect changes in levels of substances that may be biological, such changes being easily detected visually by the eye. Millington also teaches that the polymer must be chemically sensitive to an analyte substance in order for the polymer matrix to undergo a change in response to the analyte substance to be sensed, as well as such a change being displayed as a refection hologram if desired for a thin film of polymeric material where the Bragg equation mathematically defines the peak wavelength of constructive interference.

13. Regarding claim 68, Zhang et al teach wherein the step of producing and recording occurs by irradiating said crosslinkable and/or polymerizable fluid material with at least two beams of coherent light [light beam split to form a reference beam and

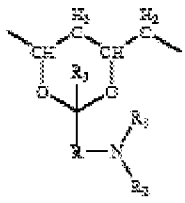
object beam each projected onto the polymerizable material, pg 3, para 3, which is in a mold, pg 12, Example], wherein one of the two beams is directed to the crosslinkable and/or polymerizable fluid material through the first molding surface whereas the other beam is directed to the crosslinkable and/or polymerizable fluid material through at least a portion of the second molding surface, wherein the two beams of coherent light form said pattern while polymerizing/crosslinking said crosslinkable and/or polymerizable fluid material to form the biocompatible sensor [HOE or lens], thereby said pattern is recorded in said biocompatible sensor to form the reflection hologram [pg 3, para 3 – pg 4, para 1, Fig 2].

14. In the alternative, Millington teaches a method for producing and recording by using two light beams split form one initial beam into a reference and an image beam to polymerize holographic recording material by creating an interference pattern [0068, Fig 12]. The examiner considers that the holographic recording material would be in a mold if a contact lens was being formed [0023].

15. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify or combine the teachings of Zhang et al with those of Millington for the benefit of having an alternative method to both cure the recording material and form the interference pattern and preferred hologram in the holographic recording medium.

16. Regarding claim 70-71, Zhang et al teach the method of claim 68, wherein the crosslinkable and/or polymerizable fluid material comprises a water-soluble prepolymer

[polymerizable water-soluble derivative of PVOH, pg 7, last para, pg 12, Example], and part 71 d) wherein the crosslinkable poly(vinyl alcohol) is a polyhydroxyl compound which has a molecular weight of at least about 2000 and comprises from about 0.5 to about 80%, based on the number of hydroxyl groups in the poly(vinyl alcohol), of units of the formula I, I and II, I and III, or I and II and III wherein R is alkylene having up to 12 carbon atoms; R.sub.1 is hydrogen or lower alkyl having up to seven carbon atoms; R.sub.2 is an olefinically unsaturated, electron-withdrawing, crosslinkable radical having up to 25 carbon atoms; R.sub.3 is hydrogen, a C.sub.1-C.sub.6 alkyl group or a cycloalkyl group; R.sub.7 is a primary, secondary or tertiary amino group or a quaternary amino group of the formula N.sup.+(R').sub.3X.sup.-, in which each R', independently of the others, is hydrogen or a C.sub.1-C.sub.4 alkyl radical and X is a counterion selected from the group consisting of HSO.sub.4.sup.-, F.sup.-, Cl.sup.-, Br.sup.-, I.sup.-, CH.sub.3COO.sup.-, OH.sup.-, BF.sup.-, and H.sub.2PO.sub.4.sup.-; and R.sub.8 is the radical of a monobasic, dibasic or tribasic, saturated or unsaturated, aliphatic or aromatic organic acid or sulfonic acid [pg 5, structure I, para 1 - para 3]:

17.  (I) where R3 can be H; Zhang et al teaches the H.

18. Regarding claim 75, Zhang et al teach the method of claim 68, wherein the crosslinkable and/or polymerizable fluid material comprises at least one prepolymer [crosslinkable polyvinyl alcohol and/or derivatives of such as set forth above] and

optionally a vinylic monomer [i.e. vinyl acetate, acrylamide, page 9, para 1], wherein at least one of the prepolymer and the vinylic monomer contains aromatic groups [aryl or arylene, pg 5, para 6] in an amount sufficient to increase refractive index differences (delta n) between areas of different polymer densities which are caused by different irradiations resulted from the pattern of interference fringes. The examiner considers that since Zhang et al are already forming a hologram in a contact lens where aryl/aromatic groups are included, that there would be aromatic groups [aryl or arylene] in an amount sufficient to increase refractive index differences (delta n) between areas of different polymer densities which are caused by different irradiations resulted from the pattern of interference fringes, and would include a sufficient or optimized refractive index difference.

19. Regarding claim 76, Zhang et al teach a method for making a biocompatible article/contact lens containing a reflection hologram as set forth above, including molding surfaces and a beam splitter for reference and object light sources [pg 3, last para – pg 4, first para].

20. Zhang et al do not teach wherein the second mold half has, on or behind the second molding surface, a mirror to reflect light coming from the first molding surface, wherein the step of producing and recording occurs by directing an incident beam of coherent light to said crosslinkable and/or polymerizable fluid material through the first molding surface, wherein the incident beam and a beam reflected by the mirror form said pattern while polymerizing/crosslinking said crosslinkable and/or polymerizable

fluid material to form the biocompatible sensor, thereby said pattern is recorded in said biocompatible sensor to form the reflection hologram. However, Millington teaches a mirror(s) [Fig 13, parts 136, 139, 0068] along with a beam splitter for recording a hologram in a sensor material [recording material], with a mirror 139 placed behind the holographic recording material 138 (which would be inside a/the transparent mold of Zhang et al) to direct the second laser beam 133 onto the holographic recording material to act as a reference beam, which then combines with the image beam (from 132) to produce an interference pattern in the holographic recording material [0068].

21. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify or combine the teachings of Zhang et al with those of Millington to produce an interference pattern in the holographic recording material.

22. *Claims 69 and 77 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang et al (WO 99/33642) of record, in view of Millington (US 2003/0103868) as applied to claims 68 and 76 above, and further in view of Zhang et al (US 2002/0093701), referred to as '701.*

23. Regarding claims 69 and 77, Zhang et al teach the method of claim 68/76, including crosslinking and/or polymerizing the crosslinkable and/or polymerizable fluid material by actinic irradiation [i.e. UV light, pg 4, para 1] as set forth above.

24. Zhang et al in view of Millington do not explicitly teach further comprising the step of partially crosslinking and/or polymerizing [curing] the crosslinkable and/or

polymerizable fluid material [optical material] by actinic irradiation [UV light], before the step of producing and recording. However, Zhang et al '701 teach such [0088] in the same field of endeavor, depending on the particular situation and parameters required for the object being formed [0088].

25. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify or combine the teachings of Zhang et al and Millington with Zhang et al '701 depending on the particular situation and parameters required for the object being formed.

26. Claim 72 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang et al (WO 99/33642) of record, in view of Millington (US 2003/0103868) as applied to claims 68 and 70 above, and further in view of Asher et al (US 2003/0027240), and further in view of Kataoka et al {Sensitive Glucose-Induced CHange of the Lower Critical Solution Temperature of Poly[N,N-dimethylacrylamide-co-3-(acrylamido)phenylboronic acid] in Physiological Saline, Macromolecules 1994, 27, 1061-1062}.

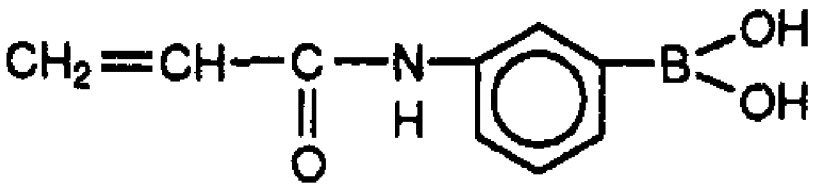
27. Regarding claim 72, Zhang et al teach a method for making a biocompatible article/contact lens containing a hologram as set forth above, and Millington teaches that a contact lens with a hologram, including a reflection hologram, can also be a biosensor as set forth above.

28. Zhang et al in view of Millington do not teach the method of claim 70, wherein the molecular sensing moiety is a phenyl boronic acid having formula (4), (5), or (6) wherein R.sub.14 and R.sub.18, independently of each other, are olefinically unsaturated, crosslinkable radicals; R.sub.15 and R.sub.16, independently of each other, are alkylene having up to 12 carbon atoms; and R.sub.17 is an arylene having 6 to 12 carbon atoms, a saturated bivalent cycloaliphatic group having 6 to 10 carbon atoms, arylenealkylene or alkylenearylene having 7 to 14 carbon atoms or arylenealkylenearylene having 13 to 16 carbon atoms. However, Asher et al teach, in the analogous field of forming lenses with additional functional properties, a sensor lens with a with a molecular sensing moiety comprised of phenyl boronic acid [Abs, 0021], for the benefit of sensing glucose as the chosen analyte using a minimally invasive monitoring method [0005].

29. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify or combine the teachings of Zhang et al and Millington with those of Asher et al for the benefit of sensing glucose as the chosen analyte using a minimally invasive monitoring method.

30. Zhang et al in view of Millington and Asher et al do not teach the specific claimed derivative(s) of phenyl boronic acid defined by structures 4, 5, or 6. However, in related art of intelligent polymers which change properties responding to external stimuli [pg 1061, para 1] and glucose analyte sensing using phenyl boronic acid generally disclosed in Asher et al, Kataoka et al teach a boronic acid derivative of claimed structure 4, with R14 constituting a 3-acrylamido unsaturated group (olefinically

unsaturated crosslinkable radical, see structure below) for the benefit of improving/increasing sensitivity to glucose-induced change in solubility of a copolymer DB-15 [pg 1061, para 6 - pg 1062, para 1].

31. 

32. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify or combine the teachings of Zhang et al, Millington, and Asher et al with those of Kataoka et al for the benefit of improving sensitivity to glucose-induced change in solubility of a copolymer.

33. *Claims 73-74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang et al (WO 99/33642) of record, in view of Millington (US 2003/0103868) as applied to claims 68 and 70 above, and further in view of Müller (US 5,508,317).*

34. Regarding claims 73-74, Zhang et al teach a method for making a biocompatible article/contact lens containing a reflection hologram as set forth above, including water soluble polymers as the polymerizable lens material.

35. Zhang et al do not explicitly teach the method of claim 70, wherein the crosslinkable and/or polymerizable fluid material is an aqueous solution, wherein the aqueous solution includes a low molecular weight additive which exhibit a limited compatibility with a polymer matrix resulted from the crosslinkable and/or polymerizable

fluid material, but good compatibility with water, wherein the low molecular weight additive is present in an amount sufficient to increase refractive index differences (delta n) between high and low irradiated areas resulted from the pattern of interference fringes, and wherein the low molecular weight additive is NaCl. However, Müller teaches, in the analogous field of forming contact lenses from water soluble polymers, such [substantially aqueous solutions of prepolymer in water or aqueous salt solutions, 10:54-64, like PVOH, Abs] with sodium chloride/NaCl as a viable salt [11:1-3] for the benefit of having a salt solution and pH similar to that of human lacrimal fluid. The examiner considers that since Zhang et al are already forming a hologram in a contact lens made of the same material, that the NaCl would be present in an amount sufficient to increase refractive index differences (delta n) between high and low irradiated areas resulted from the pattern of interference fringes.

36. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify or combine the teachings of Zhang et al and Millington with those of Muller for the benefit of having a salt solution and pH similar to that of human lacrimal fluid, as long as the necessary refractive index difference and holographic element is not destroyed.

37. *Claims 67-71, 75-77 are rejected under 35 U.S.C. 103(a) as being unpatentable over Millington (US 2003/0103868) in view of Zhang et al (US 2002/0093701).*

38. Regarding claim 67, Millington teaches a method for making a biocompatible sensor containing a reflection hologram [Abs, 0002, 0023, contact lens would be biocompatible], comprising the steps of:

39. providing a crosslinkable and/or polymerizable fluid material [holographic recording material/photopolymer material, 0068],

40. wherein the crosslinkable and/or polymerizable fluid material comprise at least a molecular sensing moiety [polymer material which may be directly sensitive to the analyte substance, or may be sensitive to the product of a reaction between the analyte and one or more other substances which are provided as components of the holographic sensor assembly, 0027] which can interact or react with an analyte of interest to provide an optical signal which is indicative of a change in one or more optical properties of the reflection hologram [Abs, 0068], and

41. producing and recording a pattern of interference fringes while polymerizing/crosslinking said crosslinkable and/or polymerizable fluid material to form the biocompatible sensor, thereby said pattern is recorded in said biocompatible sensor to form the reflection hologram [0068, using chemically sensitive photopolymer as the holographic recording material, and appropriate laser wavelength to polymerize/cure such].

42. Millington does not explicitly teach introducing the crosslinkable and/or polymerizable fluid material into a cavity formed by a mold, wherein the mold has a first mold half defining a first molding surface and a second mold half defining a second molding surface, wherein said first mold half and said second mold half are configured

to receive each other such that the cavity is formed between said first molding surface and said second molding surface; and carrying out such polymerizing in the cavity. However, since Millington does teach that such a biocompatible sensor may be in various forms [0022], including in or onto a material which is a component of or constitutes a device such as a lens [0023], it would be obvious to make or form the lens object by molding, which is a known successful method of forming lenses. Further, Zhang et al teach making lenses with holograms using a known process like molding [molds = recording medium holder, 0087], with 2 mold halves and a cavity [0095], where the recording material is polymerized to form a reflection HOE [0089].

43. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify or combine the teachings of Millington with those of Zhang et al to make or form the lens holographic object using a known process like molding [molds = recording medium holder, 0087], with 2 mold halves and a cavity [0095], where the recording material is polymerized to form a reflection HOE.

44. Regarding claim 68, Millington teaches wherein the step of producing and recording occurs by irradiating said crosslinkable and/or polymerizable fluid material [holographic recording medium or photopolymer] with at least two beams of coherent light, wherein one of the two beams is directed to the crosslinkable and/or polymerizable fluid material through the first molding surface whereas the other beam is directed to the crosslinkable and/or polymerizable fluid material through at least a portion of the second molding surface, wherein the two beams of coherent light form said pattern while

polymerizing/crosslinking said crosslinkable and/or polymerizable fluid material to form the biocompatible sensor, thereby said pattern is recorded in said biocompatible sensor to form the reflection hologram [0068].

45. In the alternative, Zhang et al teach such [0089].

46. Regarding claims 69 and 77, Millington teaches a method for making a biocompatible sensor containing a reflection hologram as set forth above.

47. Milling does not teach further comprising the step of partially crosslinking and/or polymerizing the crosslinkable and/or polymerizable fluid material by actinic irradiation, before the step of producing and recording. However, Zhang et al teach such [partially curing recording medium/optical material] depending on the particular situation and required parameters [like light power] for the material and object being formed [0088].

48. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify or combine the teachings of Millington with those of Zhang et al depending on the particular situation and required parameters [like light power] for the material and object being formed.

49. Regarding claim 70-71, Millington teaches a method for making a biocompatible sensor containing a reflection hologram as set forth above, including curable material as the recording medium.

50. Millington does not explicitly teach wherein the crosslinkable and/or polymerizable fluid material comprises a water-soluble prepolymer, nor the specific

claimed structures. However, Zhang et al teach such [i.e. polyvinyl alcohol and structure, 0068-73] for the benefit of using a suitable optical material which polymerizes rapidly.

51. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify or combine the teachings of Millington with those of Zhang et al for the benefit of using a suitable optical material which polymerizes rapidly.

52. Regarding claim 75, Millington teaches a method for making a biocompatible sensor containing a reflection hologram as set forth above, including curable material as the recording medium.

53. Milling does not teach wherein the crosslinkable and/or polymerizable fluid material comprises at least one prepolymer and optionally a vinylic monomer, wherein at least one of the prepolymer and the vinylic monomer contains aromatic groups in an amount sufficient to increase refractive index differences (delta n) between areas of different polymer densities which are caused by different irradiations resulted from the pattern of interference fringes. However, Zhang et al teach such [i.e. acrylamide, 0097] for the benefit of using comonomers suitable for hydrogel materials. Zhang et al also teach inclusion of possible aromatic groups [aryl groups, 0077, 0080] for the benefit of alternate desirable functional groups in an optical polymerizable material, 0068].

54. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify or combine the teachings of Millington with those of Zhang et al

for the benefit of using comonomers suitable for hydrogel materials, and also for alternate desirable functional groups in an optical polymerizable material.

55. Regarding claim 76, Millington et al wherein the second mold half has, on or behind the second molding surface, a mirror to reflect light coming from the first molding surface, wherein the step of producing and recording occurs by directing an incident beam of coherent light to said crosslinkable and/or polymerizable fluid material through the first molding surface, wherein the incident beam and a beam reflected by the mirror form said pattern while polymerizing/crosslinking said crosslinkable and/or polymerizable fluid material to form the biocompatible sensor, thereby said pattern is recorded in said biocompatible sensor to form the reflection hologram.

56. In the alternative, Zhang et al teach such [0089] for the benefit of creating a reflection HOE.

57. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify or combine the teachings of Millington with Zhang et al for the benefit of creating a reflection HOE.

Conclusion

58. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: US 2006/0063038, US 6,715,874, US 6,689,316.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KIMBERLY A. STEWART whose telephone number is (571)270-7004. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joe Del Sole can be reached on (571)272-1130. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

kas

/Joseph S. Del Sole/
Supervisory Patent Examiner, Art Unit 1791